

**AMENDMENTS TO THE DRAWINGS**

Fig. 6 has been amended to change the label "correction block 108" to read "correction block 110." Attached is an annotated drawing sheet for Fig. 6 showing the change. Also attached is a replacement drawing sheet for Fig. 6 with the change made. Subject to the Examiner's approval, please substitute the attached replacement drawing sheet for Fig. 6 for the drawing sheet previously filed.

### REMARKS

With claims 1-37 originally pending, with this amendment claims 15-18, 24 and 30-37 have been cancelled. Further, claims 19 and 25 have been amended to create independent claims by including limitations from their respective cancelled base claims 15 and 24. Claims 21 and 28 have been amended to be dependent from respective claims 19 and 25.

### Oath/Declaration

✓ The Office Action indicates that the declaration of record remains unsigned. As per the agreement between Examiner Torres and the undersigned on June 21, 2005, attached are copies of the documents filed by Applicants on April 11, 2002, which were also previously faxed to the Examiner on June 24, 2005. The attached documents include a Transmittal Form, a Fee Transmittal, a Response to Notice to File Missing Parts, an Executed Assignment, an Executed Declaration, Recordation Form Cover Sheet, and Notice to File Missing Parts of Nonprovisional Application – Part 2.

### Drawing Objections

The drawings stand objected to because the reference character “108” has been used to designate both correction block of 102 and correction block of 106, and a reference sign is not included for item 110 as identified in specification paragraphs [0044] and [0045]. In response, Applicants have amended the drawings to change the reference character “108” of Fig. 6 to “110” to correct this minor inadvertent clerical error. Paragraph [0044] of the specification has likewise been amended so that both paragraphs [0044] and [0045] comply with Fig. 6. Accordingly, Applicants respectfully requests that the drawing objections be withdrawn.

### Specification Objections

The disclosure stands objected to because in line 6 of paragraph 0064, the recitation “programmable gain network 154” is indicated as improper, with a suggestion to change this phrase to “programmable gain network 254.” Accordingly,

paragraph [0064] has been amended to comply with the Office Action assertions and correct a minor typographical error.

### Section 102 Rejection

Claims 1, 2, 4, 8-10, 15, 16, 21-25, 27 and 30-33 stand rejected under 35 U.S.C. § 102 as being anticipated by Shimamoto (US 6,147,672). This rejection is respectfully traversed as addressed in regard to the specific claims to follow.

Regarding claim 1, the Office Action states that Shimamoto discloses an integrated high-speed parallel-to-serial and serial-to-parallel transceiver with at least one high frequency receiver clock (fig. 3, col. 3, lines 1-56 and col. 6, lines 15-67); serial to parallel mode module (fig. 3, block 20); receiver compensation (blocks 22-26); transmitter section including a transmitter clocking circuit (Fig. 2, col. 3, lines 1-56 and col. 5, line 40 to col. 6 line 14)); parallel to serial module; (Fig. 2, block 7); and transmitter compensation (Fig. 2, blocks 9-12.)

Shimamoto, however, provides an integrated circuit that includes only half of the conversion process to that claimed. In Shimamoto, data is first parallel-to-serial converted in integrated circuit block 7 of Fig. 2 and provided through a connector 3 to a different integrated circuit 19 having a second connector 15 shown in Fig. 3. Circuit 19 of Fig. 3 provides conversion from serial to parallel to send data to a display panel. Receiver compensation is provided in Fig. 3 in blocks 22-26, as noted by the Office Action, but no subsequent parallel to serial conversion occurs in this integrated circuit 19, as claimed in claim 1. Parallel data is simply sent to a display 17 in Shimamoto. Accordingly, without Shimamoto describing an integrated transceiver with all the elements of claim 1, Applicants maintain that claim 1 is allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Regarding claim 2, the Office Action states that the serial to parallel module further comprises an even/odd splitter coupled to split the received inbound serial data into serial even data and serial odd data (figs. 3 and 6 block 15, col. 3 lines 1-56 and col. 6, lines 15-67 and col. 7 lines 27-37); and odd and even serial to parallel converters coupled to convert the odd/even data into parallel data (figs. 3 and 6 block 19 col. 3 lines 1-56 and col. 6 lines 15-67 and col. 7 lines 27-37).

Shimamoto, however, describes separation of a “parallel” input signal into even and odd “parallel” data. See col. 3, lines 2-8 of Shimamoto, indicating the data is converted to “parallel” before separation. In contrast, the even/odd splitter of claim 1 recites separating “serial” data into odd and even serial data. Claim 2 is, thus believed allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Regarding claim 4, the Office Action states that Shimamoto discloses use of “differential flip-flops” (fig. 7, col. 7 line 27 to col. 8 line 47). Shimamoto, however, only appears to show standard D-type flip-flops in Fig. 7, not differential flip-flops. In contrast, Applicants’ Fig. 2 shows flip-flops receiving differential clock signals (flip-flops each receiving two complementary clocks), as claimed in claim 4. Claim 4 is, thus, believed allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Regarding claim 8, the Office Action states that Shimamoto discloses an even parallel to serial converter operably coupled to convert outbound parallel data into even serial outbound data (figs. 5 and 7 block 6 col. 7 line 27 to col. 8 line 57); odd parallel to serial converter coupled to convert outbound parallel data into odd serial outbound data; and a combiner for combining the odd/even serial data into combined serial data (figs. 5 and 7 block 3 col. 7 line 27 to col. 8 line 57).

In contrast, however, figs. 5 and 7 of Shimamoto do not show such a combining of odd/even data. The data remains separated and provided to connector 3 in Fig. 5. Data remains separated from the connector, as shown in Fig. 6 when it is converted back to serial in blocks 19 and 20. Accordingly, claim 8 is believed allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Regarding claim 9, the Office Action states that Shimamoto discloses a differential input interface having a calibrated input impedance (figs. 5 and 7, blocks 1 and 29, col. 7 line 27 to col. 8 line 57). In contrast, however, neither of blocks 1 or 29 of figs. 5 and 7 of Shimamoto show a differential input interface, with both true and complementary signals. None appears to be described in col. 7 or col. 8 of Shimamoto. Further, col. 7 and col. 8 of Shimamoto do not disclose any calibration of the input impedance of the transmitter interface. Accordingly, claim 9 is believed allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Regarding claim 10, the Office Action states that Shimamoto discloses use of “differential flip-flops” (figs. 5 and 7, blocks 1 and 29 col. 7 line 27 to col. 8 line 57).

Again, Shimamoto, however, only appears to show and describe standard D-type flip flops in Fig. 7, not differential flip-flops. Claim 10 is, thus, believed allowable as not anticipated by Shimamoto under 35 U.S.C. § 102.

Claims 15-16 have been cancelled, rendering this rejection moot with respect to those claims.

Claim 21 includes limitations similar to claim 8 and is believed allowable over Shimamoto based on the remarks presented above with respect to claim 8.

Claim 22 includes limitations similar to claim 9 and is believed allowable over Shimamoto based on the remarks presented above with respect to claim 9.

Claim 23 includes limitations similar to claim 10 and is believed allowable over Shimamoto based on the remarks presented above with respect to claim 10.

Claim 24 has been cancelled rendering this rejection moot with respect to claim 24.

Claim 25 includes limitations similar to claim 2 and is believed allowable over Shimamoto based on the remarks presented above with respect to claim 2.

Claim 27 includes limitations similar to claim 4 and is believed allowable over Shimamoto based on the remarks presented above with respect to claim 4.

Claims 30-33 have been cancelled rendering this rejection moot with respect to those claims.

### Section 103 Rejection

Claims 3, 17, 18 and 26 stand rejected under 35 U.S.C. § 103 as being unpatentable over Shimamoto as applied to claim 2 above, and further in view of Ipek (US 20010018334). Claims 17 and 18 have been cancelled rendering this rejection moot with respect to those claims. Claims 3 and 26 are believed allowable as nonobvious over Shimamoto in view of Ipek based at least on their dependency from claims 1 and 25, which Applicants maintain are allowable as indicated in the remarks above.

Claims 5, 7, 11, 19, 28 and 34 stand rejected under 35 U.S.C. § 103 as being unpatentable over Shimamoto as applied to claim 1 above, and further in view of Welland (US 20010018334). Claim 34 has been cancelled rendering this rejection

moot with respect to claim 34. This rejection is respectfully traversed as addressed in regard to the specific claims to follow.

Initially Applicants maintain that claims 5, 7, 11, and 28 are allowable as nonobvious over Shimamoto in view of Welland base at least on their dependency from respective claims 1 and 25, which Applicants maintain are allowable as indicated in the remarks above.

Regarding claim 5, the Office Action states that Shimamoto discloses the elements of claim 1, but does not disclose the additional elements of dependent claim 5. The Office Action continues stating that Welland, however discloses a fine phase detector (Figs. 1-6 block 402); a fine charge pump (Figs. 1-6 block 402); a coarse phase and frequency detector (Figs. 1-6 block 406); and a coarse charge pump (Figs. 1-6 block 406). The Office Action, then, continues stating that it would be obvious to combine Shimamoto with Welland to form Applicants' claim 1. This rejection is respectfully traversed.

Welland discloses a capacitor 402 for fine tuning, and another capacitor 406 for coarse tuning in a VCO 400 shown in its Fig. 4. A phase detector 206 and charge pump 208 of Fig. 5 feed the VCO, but neither the phase detector 206 nor charge pump 208 appear to provide any separated fine tuning and coarse tuning, as claimed in claim 5. To maintain a prima facie case of obviousness, the combined references must show all the claimed features. Since Welland does not show a phase detector or charge pump with both fine and coarse tuning, claim 5 is believed non-obvious over Shimamoto in view of Welland.

Claims 7 and 11 are believed to be non-obvious over Shimamoto in view of Welland based at least on their dependency from claim 1.

Claims 19 and 28 both include limitations similar to claim 5 and are believed allowable over Shimamoto in view of Welland based on the remarks presented above with respect to claim 5.

Claims 6, 13, 14, 20 and 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Shimamoto in view of Welland as applied to claim 5 above, and further in view of Kim (US 20010018334). Applicants maintain that claims 6, 13, 14, 20 and 29 are allowable as nonobvious over Shimamoto in view of Welland and Kim

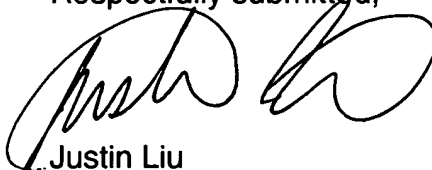
base at least on their dependency from respective claims 1, 19 and 25, which Applicants maintain are allowable as indicated in the remarks above.

CONCLUSION

All of claims 1-14, 19-23, and 25-29 should be now be in condition for allowance and a Notice of Allowance is respectfully requested.

If there are any questions, the applicant's attorney can be reached at Tel: 408-879-6149 (Pacific Standard Time).

Respectfully submitted,



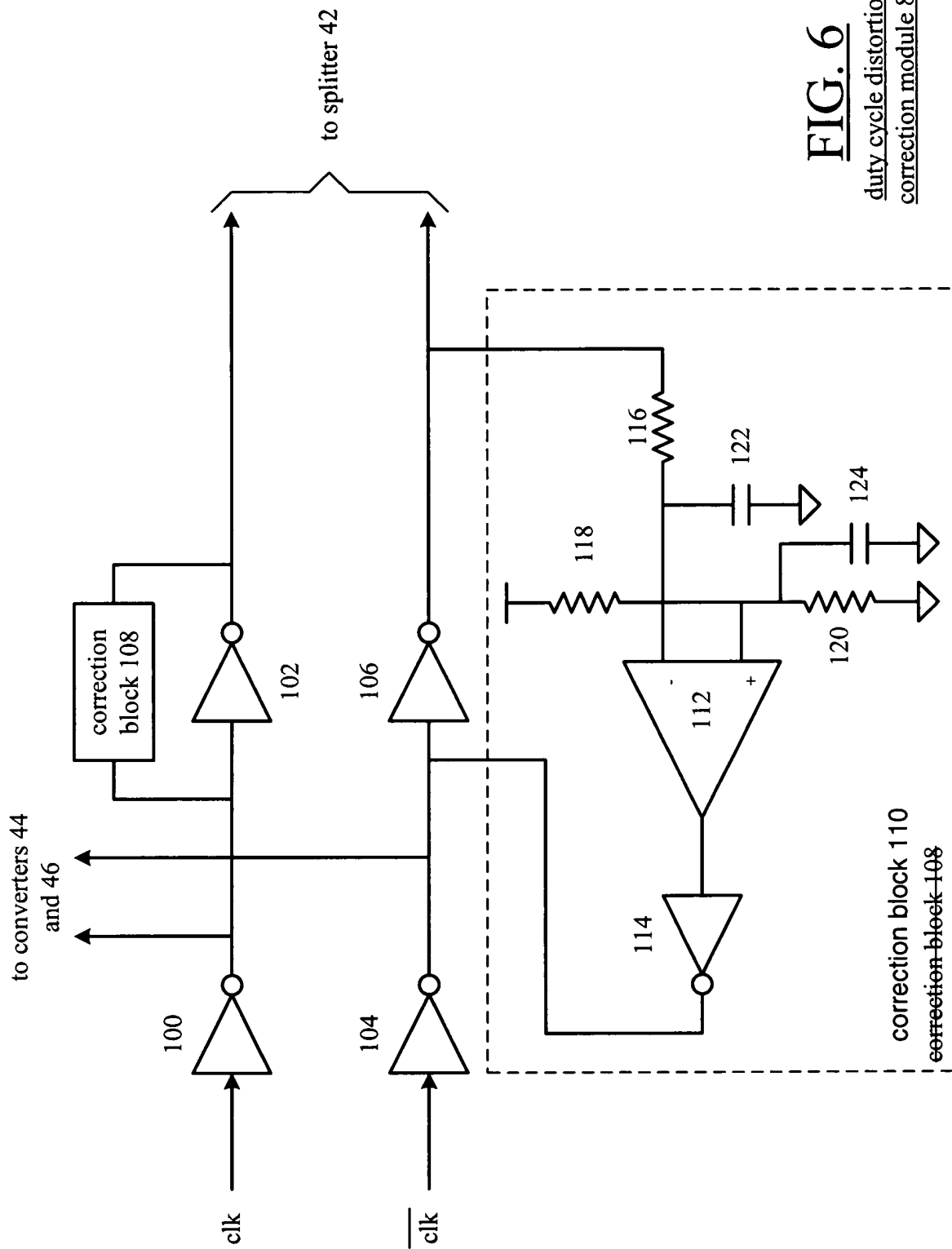
Justin Liu  
Attorney for Applicant(s)  
Reg. No. 51,959  
408-879-4641

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Julie Matthews  
Name



Signature



**FIG. 6**  
duty cycle distortion  
correction module 88





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DOCKETED  
APR 30 2002

Inventor(s): Jinghui Lu et al.

Assignee: **XILINX, INC.**

Serial No.: 10/051,222

Filed: 01-18-02

conf.no. 7174

Title: An Integrated High-Speed Serial-to-Parallel and Parallel-to-Serial Transceiver

Docket No.: **X-1055 US**

- Enclosed:
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  - Fee Transmittal (in duplicate)
  - Response to Notice to File Missing Parts
  - Executed Assignment
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  - Recordation Form Cover Sheet
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APR 30 2002



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Date: April 11, 2002  
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PTO/SB/21 (12-97)

Approved for use through 9/30/00. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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# TRANSMITTAL FORM

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Application / Conf. No.	10/051,222 / 7174
Filing Date	January 18, 2002
First Named Inventor	Jinghui Lu
Examiner Name	Unknown
Group Art Unit	2681
Issue Fee Batch No.	
Attorney Docket Number	X-1055 US

## ENCLOSURES (check all that apply)

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<input type="checkbox"/> Change Status to LARGE ENTITY	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	Notice to File Missing Parts of Nonprovisional Application - Part 2
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<input checked="" type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Customer Number	Attn: H. C. Chan	24309 (Customer Number)	Reg. Number 35,477
Signature			
Date	April 11, 2002	Charge any additional fees required/credit any overpayment to our Deposit Account Number: 24-0040	

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Typed or Printed Name	Pat Slaback		
Signature		Date	April 11, 2002

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<b>FEE TRANSMITTAL</b> <b>for FY 2001</b>  <i>Patent fees are subject to annual revision</i>		<b>Complete if Known</b>		
		Application / Conf. No.	10/051,222 / 7174	
		Filing Date	January 18, 2002	
		First Named Inventor	Jinghui Lu	
		Examiner Name	Unknown	
		Group / Art Unit	2681	
TOTAL AMOUNT OF PAYMENT (\$)		170.00	Attorney Docket No.	X-1055 US

<b>METHOD OF PAYMENT (check one)</b>		<b>FEE CALCULATION (continued)</b>																													
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees, any additional fees required, and credit any over payments to:</p> <p>Deposit Account Number: 24-0040</p> <p>Deposit Account Name: XILINX, INC.</p> <p><input type="checkbox"/> Charge the any additional Fee Required Under 37 CFR §§ 1.16 and 1.17</p> <p>2. <input type="checkbox"/> Payment Enclosed: <input type="checkbox"/> Check <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>		<b>3. ADDITIONAL FEES</b> Large Entity Fee Fee Code (\$)																													
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<p>**or number previously paid, if greater; For Reissues, see below</p> <table border="1"><thead><tr><th>Large Entity Fee Code</th><th>Fee (\$)</th><th>Fee Description</th></tr></thead><tbody><tr><td>103</td><td>18</td><td>Claims in excess of 20</td></tr><tr><td>102</td><td>80</td><td>Independent claims in excess of 3</td></tr><tr><td>104</td><td>270</td><td>Multiple dependent claim, if not paid</td></tr><tr><td>109</td><td>80</td><td>**Reissue independent claims over original patent</td></tr><tr><td>110</td><td>18</td><td>**Reissue claims in excess of 20 and over original patent</td></tr><tr><td colspan="3">SUBTOTAL (2)</td><td>(\$)</td></tr></tbody></table>		Large Entity Fee Code	Fee (\$)	Fee Description	103	18	Claims in excess of 20	102	80	Independent claims in excess of 3	104	270	Multiple dependent claim, if not paid	109	80	**Reissue independent claims over original patent	110	18	**Reissue claims in excess of 20 and over original patent	SUBTOTAL (2)			(\$)	112 920* Requesting publication of SIR prior to Examiner action							
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103	18	Claims in excess of 20																													
102	80	Independent claims in excess of 3																													
104	270	Multiple dependent claim, if not paid																													
109	80	**Reissue independent claims over original patent																													
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		115 110 Extension for reply within first month																													
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		118 1,440 Extension for reply within fourth month																													
		128 1,960 Extension for reply within fifth month																													
		119 320 Notice of Appeal																													
		120 320 Filing a brief in support of an appeal																													
		121 270 Request for oral hearing																													
		138 1,510 Petition to institute a public use proceeding																													
		140 110 Petition to revive - unavoidable																													
		141 1,240 Petition to revive - unintentional																													
		142 1,280 Utility issue fee (or reissue)																													
		122 130 Petitions to the Commissioner																													
		123 50 Petitions related to provisional applications																													
		126 180 Submission of Information Disclosure Stmt																													
		581 40 Recording each patent assignment per property (times number of properties) \$40																													
		146 740 Filing a submission after final rejection (37 CFR 1.129(a))																													
		149 740 For each additional invention to be examined (37 CFR 1.129(b))																													
		179 740 Request for Continued Examination (RCE)																													
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		*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$)																													
		170.00																													

<b>SUBMITTED BY</b>		<b>Complete (if applicable)</b>	
Name (Print/Type)	H. C. Chan	Registration No. (Attorney/Agent)	35,477
Signature		Telephone	408-879-6149
		Date	04-11-2002

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PATENT

IN THE UNITED STATES PATENT OFFICE

Applicants: Jinghui Lu et al.  
Assignee: Xilinx, Inc.  
Title: An Integrated High-Speed Serial-to-Parallel and Parallel-to-Serial Transceiver  
Serial No.: 10/051,222 File Date: 01-18-02  
Examiner: Unknown Art Unit: 2681  
Docket No.: X-1055 US Conf. No. 7174  
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ATTENTION: BOX MISSING PARTS  
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Washington, D. C. 20231

RESPONSE TO NOTICE TO FILE MISSING PARTS  
OF APPLICATION - FILING DATE GRANTED

Dear Sir:

Applicant hereby responds to the Notice to File Missing Parts of Application mailed from the Patent Office on February 27, 2002. Enclosed herewith find the Assignment, which has been notarized, Assignment Recordation Cover Sheet, the Declaration signed by all of the inventors, and Part 2 of the Notice to File Missing Parts of Application - Filing Date Granted.

The Commissioner is hereby authorized to charge the \$130.00 fee for the filing of the Declaration after filing of the patent application and the \$40.00 fee for the recordation of the Assignment plus any additional fees which may be required to Deposit Account No. 24-0040.

Respectfully submitted,

H. C. Chan  
Attorney for Applicants  
Reg. No. 35,477

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Pat Slaback  
Name

  
Signature

FORM PTO-1595

6-93

OMB No. 0651-0011 (exp. 4/94)

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Patent Office

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To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party: Jinghui Lu; Shahriar Rokhsaz; Stephen D. Anderson; Michael A. Nix; Ahmed Younis; Michael Ren Kent; Yvette P. Lee; Firas N. Abughazaleh; Brian T. Brunn; Moises E. Robinson; Kazi S. Hossain

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Xilinx, Inc.

Internal Address: \_\_\_\_\_

Street Address: 2100 Logic DriveCity: San Jose State: California Zip: 95124Additional name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of Conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other

Execution Date: 01-24; 02-01; 02-05; 02-28; 04-03; 04-09

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the filing date of the application is: \_\_\_\_\_

A. Patent Application No(s)

10/051,222

"An Integrated High-Speed Serial-to-Parallel and Parallel-to-Serial Transceiver"

B. Patent No(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: H. C. CHANInternal Address: Xilinx, Inc.Street Address: 2100 Logic DriveCity: San Jose State: California Zip: 951246. Total number of applications and patents involved: one7. Total fee (37 CFR 3.41):.....\$ 40.00☐ Enclosed☒ Authorized to be charged to deposit account8. Deposit Account Number: 24-0040

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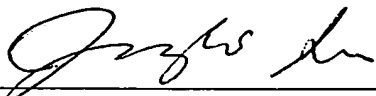
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<u>Shahriar Rokhsaz</u>	of	<u>4507 Autumn Leaf Hollow, Austin, Texas 78731</u>
<u>Stephen D. Anderson</u>	of	<u>15161 Williston Lane, Minnetonka, Minnesota 55345</u>
<u>Michael A. Nix</u>	of	<u>16008 Scenic Oak Trail, Buda, Texas 78610</u>
<u>Ahmed Younis</u>	of	<u>4701 Monterey Oaks Blvd. #1138, Austin, Texas 78749</u>
<u>Michael Ren Kent</u>	of	<u>7601 Jester Blvd., Austin, Texas 78750</u>
<u>Yvette P. Lee</u>	of	<u>4700 #4 River Place Blvd., Austin, Texas 78730</u>
<u>Firas N. Abughazaleh</u>	of	<u>9018 Lantana Way, Austin, Texas 78749</u>
<u>Brian T. Brunn</u>	of	<u>2803 Lenwood Court, Austin, Texas 78738</u>
<u>Moises E. Robinson</u>	of	<u>11205 Peony Cove, Austin, Texas 78750</u>
<u>Kazi S. Hossain</u>	of	<u>744 William Cannon Drive, #2092, Austin, Texas 78745</u>

hereby sell, assign and transfer to Xilinx, Inc., a Delaware corporation, having a place of business at 2100 Logic Drive, San Jose, California 95124, its successors and assigns, the entire right, title and interest throughout the world in our invention

AN INTEGRATED HIGH-SPEED SERIAL-TO-PARALLEL  
AND PARALLEL-TO-SERIAL TRANSCEIVER

for which I/we will execute a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; I/we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from me/us; I/we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, its successors, assigns and nominees, at its request and expense, in obtaining and enforcing patents for said invention in all countries; and I/we request the Commissioner of Patents and Trademarks to issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 28<sup>th</sup> day of February, 2002.

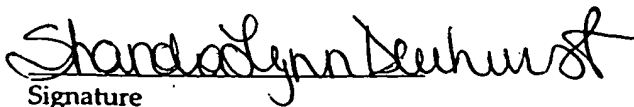
  
Jinghui Lu

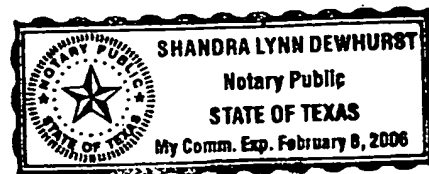
State of Texas  
County of TARRANT

CAPACITY CLAIMED BY SIGNER  
☒ oneself/themselves

on February 28, 2002 before me, Shandra Lynn Dewhurst, Notary Public,  
personally appeared Jinghui Lu [ ] personally known to me --or-- [ ] proved to me  
on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument  
and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by  
his/her signature on the instrument the person, or the entity upon behalf of which the person acted,  
executed the instrument.

WITNESS my hand and official seal.

  
Signature



Executed this 12 day of March, 2002

Michael Ren Kent  
Michael Ren Kent

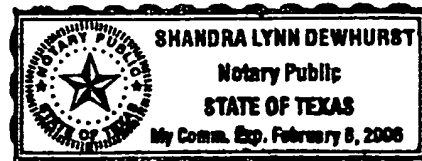
State of Texas  
County of Texas

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

On March 12, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Michael Ren Kent [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 1st day of March, 2002

Yvette P. Lee  
Yvette P. Lee

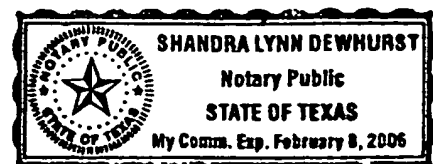
State of Texas  
County of Texas

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

On March 1, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Yvette P. Lee [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 28 day of February, 2002.

Firas Abughazaleh  
Firas N. Abughazaleh

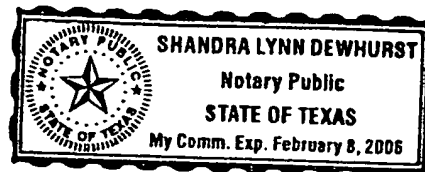
State of Texas  
County of Texas

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

on February 28, 2002 before me, Shandra Lynn Dewhurst Notary Public, personally appeared Firas N. Abughazaleh [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 28 day of February, 2002.

Brian T. Brunn  
Brian T. Brunn

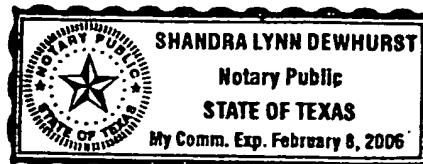
State of Texas  
County of Texas

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

on February 28, 2002 before me, Shandra Lynn Dewhurst Notary Public, personally appeared Brian T. Brunn [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature





Executed this 28 day of February, 2002

Moises E. Robinson G.  
Moises E. Robinson

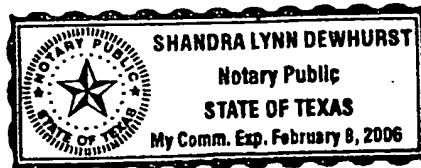
State of Texas  
County of Travis

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

On February 28, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Moises E. Robinson [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 28 day of February, 2002.

Kazi S. Hossain  
Kazi S. Hossain

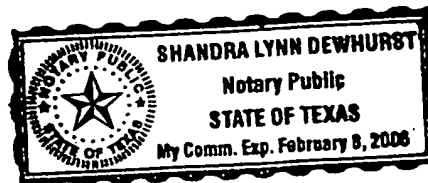
State of Texas  
County of Travis

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

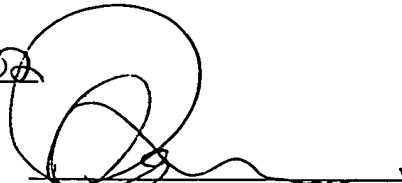
On February 28, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Kazi S. Hossain [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 28 day of February, 2002

  
Shahriar Rokhsaz

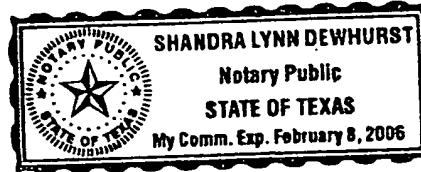
State of Texas  
County of \_\_\_\_\_

CAPACITY CLAIMED BY SIGNER  
☒ oneself/themselves

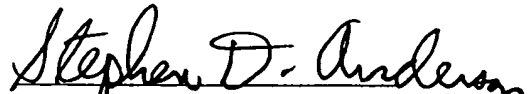
On Feb 28, 2002 before me, Shandra Lynn Dewhurst Notary Public, personally appeared Shahriar Rokhsaz ☐ personally known to me --or-- ☐ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 9 day of April, 2002

  
Stephen D. Anderson

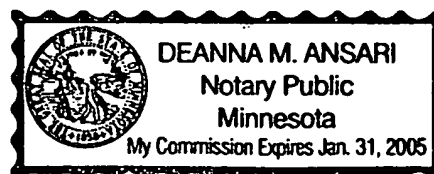
State of Minnesota  
County of Nakota

CAPACITY CLAIMED BY SIGNER  
☒ oneself/themselves

On April 9, 2002 before me, DEANNA M. ANSARI, Notary Public, personally appeared Stephen D. Anderson ☐ personally known to me --or-- ☐ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Deanna M. Ansari  
Signature



Executed this 28 day of February, 2002.

Michael A. Nix  
Michael A. Nix

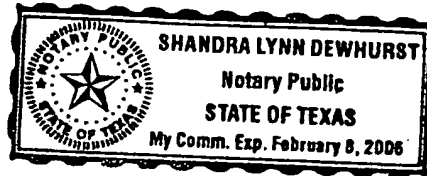
State of Texas  
County of Travis

CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

On February 28, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Michael A. Nix [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature



Executed this 28 day of February, 2002.

Ahmed Younis  
Ahmed Younis

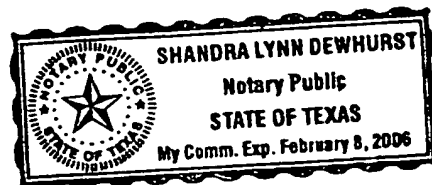
State of Texas  
County of Travis

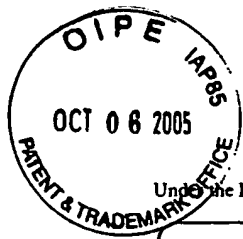
CAPACITY CLAIMED BY SIGNER  
[ X ] oneself/themselves

On February 28, 2002 before me, Shandra Lynn Dewhurst, Notary Public, personally appeared Ahmed Younis [ ] personally known to me --or-- [ ] proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Shandra Lynn Dewhurst  
Signature





Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PTO/SB/01A (10-00)  
Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

Title Of Invention: **AN INTEGRATED HIGH-SPEED SERIAL-TO-PARALLEL AND PARALLEL-TO-SERIAL TRANSCEIVER**  
Docket No. **X-1055 US**

As a below named inventor(s), I/We declare that:

This declaration is directed to:

- ☒ The attached application, or  
☐ Application No. \_\_\_\_\_, filed on \_\_\_\_\_,  
☐ as amended on \_\_\_\_\_ (if applicable);

I/We believe I/We am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/We have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/We acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including material information which became available while the application was pending in the United States Patent and Trademark Office; and

All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

**FULL NAME OF INVENTOR(S)**

Inventor One: **Jinghui Lu** Date **2/1/2002**

Signature:  Citizen of: **United States**

Inventor Two: **Shahriar Rokhsaz** Date **Jan 24/02**

Signature:  Citizen of: **Iran**

Inventor Three: **Stephen D. Anderson** Date **4-9-2002**

Signature:  Citizen of: **United States**

Inventor Four: **Michael A. Nix** Date **January 24, 2002**

Signature:  Citizen of: **United States**

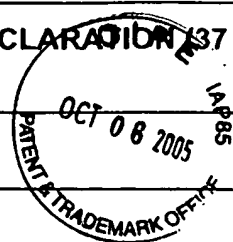
☒ Additional inventors are being named on **ONE** additional form(s) attached hereto.

Burden Hour Statement: This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is used by the public to file (and the PTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This form is estimated to take 1 minute to complete. This time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

HCC:pbs

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)**

(Additional Inventors)



Inventor Five: Ahmed Younis Date 1/24/02

Signature: [Signature] Citizen of: Jordan

Inventor Six: Michael Ren Kent Date 2/1/02

Signature: [Signature] Citizen of: United States

Inventor Seven: Yvette P. Lee Date 4/3/02

Signature: [Signature] Citizen of: Canada

Inventor Eight: Firas N. Abughazaleh Date 2/28/02

Signature: Firas Abughazaleh Citizen of: ~~United States~~ JORDAN

Inventor Nine: Brian T. Brunn Date 2/5/02

Signature: Brian T. Brunn Citizen of: United States

Inventor Ten: Moises E. Robinson G. Date 01/24/2002

Signature: Moises E. Robinson G. Citizen of: Panama

Inventor Eleven: Kazi S. Hossain Date 01/24/2002

Signature: [Signature] Citizen of: Bangladesh

Inventor Twelve: \_\_\_\_\_ Date \_\_\_\_\_

Signature: \_\_\_\_\_ Citizen of: \_\_\_\_\_